

Dr. Ramesh Kumar

Contact

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Assistant Professor
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Dr. Ramesh Kumar S/o Sh. Ram Kumar
MTH-17, GJUS&T, Hisar-125001

Date of Birth:

April 02, 1985

Family :

Married, 2 child



Job

17/06/2016-till date

Assistant Professor

Department of Physics, GJUS&T, Hisar

March, 2013-16/06/2016

Assistant Professor

Department of Physics, SD College, Ambala Cantt.

Education

2009-2014

Ph.D.

Kurukshetra University, Kurukshetra (INDIA)

Worked on Interaction Potentials and its applications to physical systems such as quark-antiquark and quantum dots

2006-2008

M. Sc. Physics

Kurukshetra University, Kurukshetra (INDIA)

2007

CSIR-UGC JRF

Qualified for Junior Research Fellowship

2003-2006

B.Sc.

Kurukshetra University, Kurukshetra, Haryana (INDIA)
Passed with 72% marks

Teaching Experience:

(More than **10** Years for both **UG** and **PG** classes)

March, 2013 – till date

M.Sc. Physics and B.Sc. Physics

2009 – 2013

M.Sc. Physics (Lab Experience)

Department of Physics, Kurukshetra University,
Kurukshetra, India

Research Interest:

Broad Area: Theoretical Condensed Matter Physics (DFT based simulation of energy materials, Nanomaterials, Topological Insulators and their modeling using different software such as MATLAB etc.),

Solutions of Schrodinger Equation to some nonlinear physical potentials,

Research Publications(list attached):

Total research papers published: 07

- In reputed International Journals: 07

Research Papers Presented in Conferences, Seminars, Schools and

Workshops:

Attended and paper presented in more than 25 National/International conferences, seminars, schools and workshops

List of Publications

In International / National Journals/ Conference Proceeding

Sr. No.	Author's List	Year	Title of the Paper	Full Journal Name	Vol. No. / Page No.
1	Gagandeep, M. Singh, R. Kumar & Fakir Chand	2019	A theoretical modeling of the Cu(In, Ga)Se ₂ solar cell	AIP Conference Proceedings	2093 /020018
2	Gagandeep, M. Singh, R. Kumar & Fakir Chand	2018	A theoretical study of perovskite material for solar cell application	AIP Conference Proceedings	2006 / 30046
3	Ramesh Kumar & Fakir Chand	2014	Solutions to the N-dimensional radial Schrodinger equation for the ar^2+br-c/r potential	Pramana Journal of Physics (Springer)	Vol. 83 pp.39-48
4	Ramesh Kumar & Fakir Chand	2013	Asymptotic study to the N-dimensional radial Schrodinger equation for the Quark-Antiquark System	Communication in Theoretical. Physics (IOP)	Vol.59 pp.528
5	Ramesh Kumar & Fakir Chand	2012	Energy spectra of the Coulomb Perturbed Potential in N-Dimensional Hilbert Space	Chinese Physics Letter (IOP)	Vol.29 pp.060306
6	Ramesh Kumar & Fakir Chand	2012	Reply to comment on series solutions to the N-dimensional radial Schrodinger equation for the Quark-Antiquark interaction potential	Physica Scripta (IOP)	Vol. 86 pp.027002
7	Ramesh Kumar & Fakir Chand	2012	Series solutions to the N-dimensional radial Schrodinger equation for the Quark-Antiquark interaction potential	Physica Scripta (IOP)	Vol.85 pp.055008

Project Sanctioned/Running/Completed

S. No.	Programme	Title	Amount (Rs.)	Duration	Status
1	UGC Startup Project	Simulation and Modeling of Chalcopyrites: Promising Materials for Solar Cell	10 lacs	2 years	Running

Faculty Development Programs, Schools and Workshops attended

S. No.	Programme	Duration	Organized by
1	UGC Sponsored Refresher Course	Nov. 11-Dec. 01, 2016	HRDC Kurukshetra University Kurukshetra
2	GIAN Workshop on Nanotechnology	Oct. 16-20, 2016	GJUS&T, Hisar
3	Workshop on Computational Physics	March 30-31, 2015	SD College, Ambala Cantt.
4	87 th BRNS-IANCAS National Workshop on Radiochemistry and Application of Radioisotopes	October 6-11, 2014	SD College, Ambala Cantt.
5	Orientation Course	Nov. 07-Dec. 04, 2013	Academic Staff College, Kurukshetra University
6	Advanced Characterization And Simulation Techniques	March 12-17, 2012	Kurukshetra University
7	17 th DAE-BRNS National Symposium & workshop on Thermals Analysis	March 09-13, 2010	Kurukshetra University
8	Winter School on Experimental Nonlinear Dynamics	Dec. 01-05, 2008	SINP Kolkata

Extension Lecture/talks delivered

S. No.	Programme	Duration	Organized by
1	Workshop on Experimental Physics	Sept. 29-30, 2016	FGM Govt. College, Adampur

Paper Presented in Conferences, Seminars & Symposia

S. No.	Title of the Paper presented	Title of Conference / Seminar	Organized by	Whether international / national/ state/ regional/college or university level
1	Simulation of Perovskite Solar Cell with Graphene Material	ICPHPV- 2019 (Feb. 4-8, 2019)	Deptt. of Physics IIT Delhi	International
2	Simulation of Perovskite solar cell with Graphene as hole transporting material	63 rd DAE Solid State Physics Symposium	Deptt. of Physics GJUS&T, Hisar	National
3	A Theoretical Modelling of the Cu (In, Ga) Se ₂ Solar Cell	National Conference on Recent Advances in Condensed Matter Physics (RACMP-18) Oct. 12,13-2018	Deptt. of Physics, Kurukshetra University Kurukshetra	National
4	A Theoretical Study of Perovskite Materials for Solar Cell Application	National Conference on Recent Advances in Experimental and Theoretical Physics (RAETP-2018), April 17-18, 2018	Deptt. of Physics and Astronomy Central University of Jammu	National
5	The Efficiency Variation of Perovskite Solar Cell with Resistance	International Conference on Advance in Optics and Photonics (ICAOP) Nov. 23-26.2017	Deptt. of Physics GJUS&T, Hisar	International
6	Study of Heavy-Light mesons Properties for Cornell plus Harmonic Interaction	National Conference on Physics of Engineering Materials (NCPem-2016) from March. 10-11, 2016	Deptt. of Physics, DCRUST, Murthal Haryana (INDIA)	National
7	A study to the quark-antiquark interaction potential	National Conference on Current Advances in Theoretical Physics (CATEP-15) (Nov. 07, 2015)	Deptt. of Applied Physics, SD College, Ambala Cantt.	National
8	Study of optical properties of a Donor Impurity in 2D Quantum Pseudo dot	National Conference on Physics Industry Interface Sept. 02-04, 2015,	Deptt. of Physics, K.U. Kurukshetra, Haryana (INDIA)	National

9	Study of quantum pseudo dot system using Asymptotic Iteration Method	National Seminar on Recent Trends in Physics & Chemistry March 25,2015	Deptt. of Physics, SA Jain College, Ambala City	National
10	Exact solutions of the Modified Cornell plus Harmonic Potential in N-dimensional space for spherical quantum dots	National Seminar on Recent Developments in Theoretical & Experimental March 21,2015	Deptt. of Applied Physics, SD College, Ambala Cantt.	National
11	A study to the quark-antiquark interaction potential in N-dimensional space	National Conference on Emerging Challenges in Nuclear and Many Body Physics November 10-11, 2014	University of Jammu, Jammu.	National
12	Asymptotic solutions to the quantum dot confining potential in N-dimensional Hilbert space	Recent development in Physics, March 29-30, 2014	Deptt. Of Physics, S.D. College, Panipat	National
13	Approximate solutions to the quantum dot confining potential in N-dimensional Hilbert space	National Symposium on Electroceramics-Materials and Devices Feb. 21-22, 2014	Deptt. Of Physics GVM Girls College, Sonapat	National
14	Study of exciton spectra in quantum dots for a potential containing Coulomb and quadratic terms in N-dimensional Hilbert space	National Conference on Physics of Engineering Materials March 15-17, 2013	Deenbandhu Chotu Ram University of Science & Technology, Murthal, Sonapat (Haryana)	National
15.	Mass spectra of heavy quarkonia using Cornell plus harmonic potential	DAE-symposium on nuclear physics Dec. 3-7,2012	Delhi University, Delhi	National
16.	Energy spectra of a spherical quantum dot confining potential in N-dimensional Hilbert space	National Conference on Recent Advances in Material Science Feb. 25-26, 2012	Deptt. Of Physics Dyal Singh College, Karnal (Haryana)	National
17.	Series Solutions of the N-dimensional Effective Mass Schrodinger Equation for A Potential Family	CDAMOP-2011 Dec. 14-16, 2011	Delhi University, Delhi	International
18.	Asymptotic solutions of	International	IIT Roorkee	International

	the N-dimensional radial Schrodinger equation for the Quark-Antiquark interaction potential using Asymptotic Iteration Method	Conference on Advances in Modeling, Optimization and Computing Dec. 5-7, 2011		
19.	Series solutions of the N-dimensional radial Schrodinger equation for the Quark-Antiquark interaction potential	International Conference on Theoretical and Applied Physics Dec. 1-2, 2011	IIT Kharagpur	International

(Ramesh Kumar)